

**PATENT APPLICATION**

**DISCOUNT-INSTRUMENT METHODS AND SYSTEMS**

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## **DISCOUNT-INSTRUMENT METHODS AND SYSTEMS**

### **CROSS REFERENCE TO RELATED APPLICATION**

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[0001] This application is a continuation-in-part of U.S. Pat. Appl. No. 10/268,040, entitled "DISCOUNT-INSTRUMENT METHODS AND SYSTEMS," filed October 8, 2002 by Christopher R. McGee *et al.*, the entire disclosure of which is herein incorporated by reference for all purposes.

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### **BACKGROUND OF THE INVENTION**

[0002] This application relates generally to discount instruments. More specifically, this application relates to methods and systems for providing discount instruments that may 15 be used in fundraising applications.

[0003] There are many organizations that rely on fundraising drives or events to finance their operations. Common examples are seen in school groups, such as athletic and other types of clubs, that use fundraising techniques to finance the purchase of uniforms, 20 equipment, and travel, among other expenses. These school groups may engage in fundraising activities regardless of their level, including elementary-school, secondary-school, and university-level groups. Moreover, fundraising activities are often used by other types of groups to finance their activities, including, for example, scouting and social organizations. While many such groups are children's groups, there are also adult groups that 25 rely on similar fundraising activities for financial support.

[0004] A persistent problem faced by fundraising organizations is the need to find a fundraising program that is sufficiently appealing to raise the desired funds. In some instances, organizations may rely on donations of a purely charitable nature, although it is 30 often believed that the fundraising is more successful when the donor acquires something of value in exchange. Accordingly, many fundraising drives typically take the form of having

individuals in the organization sell a product to customers, with the organization taking some of the profit from the sale. There are a wide variety of products that may be sold, common examples of which include magazine subscriptions, cookies, and candy. While these approaches do have some success, they usually rely on a partnership between the fundraising organization and the regular producer of the product. To accommodate the funds retained by the fundraising organization, the cost of the products may be greater to the consumer than if they were purchased elsewhere and/or the profit provided to the regular producer may be lower than is usual for a comparable purchase. Both of these factors act to limit the overall success of the fundraising activity.

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[0005] There is accordingly a need in the art for methods and systems that limit the negative impact of these factors.

#### BRIEF SUMMARY OF THE INVENTION

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[0006] Embodiments of the invention thus provide for discount-instrument methods and systems. In some instances, the discount instruments used by such methods and systems may result from a fundraising activity, but this is not a requirement. The result of such a fundraising activity is to provide customers with a discount instrument that may be used with merchants to obtain discounts on goods and/or services. In other instances, customers may acquire such a discount instrument through other means. In embodiments of the invention, the customer presents the discount instrument to the merchant to obtain the discount. The merchant ascertains whether the discount instrument is active and determines an applicable discount to be applied to a transaction.

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[0007] In a first set of embodiments, a method is provided to apply a discount to a transaction. An identifier is extracted from a discount instrument, such as by reading a magnetic strip on the discount instrument, and is transmitted to a host system from a point of sale. The identifier may, for example, comprise an account number extracted from the discount instrument, which may be a plastic card. The transmission to the host system may, for example, take the form of an authorization. A validation is received from the host system for the discount instrument and the transaction is modified in accordance with a discount

arrangement associated with the discount instrument. The transaction modification may be dictated by discounting information included on the discount instrument, such as in the form of a bar code or otherwise. Alternatively, the transaction modification may be dictated by discounting information received from the host system. The transaction modification may  
5 take a variety of different forms, examples of which include a uniform reduction in transaction cost by a predetermined percentage or through a full-cost deduction of at least one item comprised by the transaction.

[0008] In a second set of embodiments, a method is provided to apply a discount to a  
10 transaction. Information relating to a discount arrangement is extracted from a discount instrument at a point of sale. The transaction is modified in accordance with the discount arrangement and information relating to the discount arrangement is updated on the discount instrument. In one such embodiment, the information relating to the discount arrangement is extracted from a chip on the discount instrument. In another embodiment, the information  
15 relating to the discount arrangement is updated by writing information onto the chip. The transaction may be modified by applying a uniform cost reduction by a predetermined percentage or through a full-cost deduction of at least one item comprised by the transaction.

[0009] The above methods may be implemented with a point-of-sale device having a  
20 housing with a display screen, a data-entry device, a memory, a communications device, and a processor coupled with the data-entry device, the memory, and the communications device. Such a point-of-sale device may be configured to perform the methods described above.

[0010] In a third set of embodiments, a method is provided for managing a discount  
25 arrangement. Information relating to the discount arrangement is maintained. An identifier for a discount instrument presented during a transaction is received from a point of sale, and a determination is made whether the identifier identifies an active discount instrument. If so, information for the discount arrangement is transmitted back to the point of sale to identify the discount instrument as an active discount instrument. The discount arrangement may  
30 define a variety of different transaction modifications, examples of which include a uniform reduction in transaction cost by a predetermined percentage or a full-cost deduction of at least

one item comprised by the transaction. In some embodiments, the information relating to the discount arrangement may also be updated.

[0011] In some embodiments, the methods may include provisions to accommodate nonparticipating merchants. In these embodiments, a method is provided for implementing a program of discount arrangements. Discount-arrangement information relating to a plurality of discount arrangements is maintained, with each such discount arrangement being associated with one of a plurality of merchants. Transaction information related to a transaction at a point of sale is received, with the transaction information identifying a merchant party to the transaction. An identifier for a discount instrument presented at the point of sale during the transaction is received. A determination is made whether the merchant party is one of the plurality of merchants is made. Validation information is then returned to the point of sale in accordance with the determination.

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[0012] The validation information may comprise an indication that the merchant party is not one of the plurality of merchants. In instances where the merchant party is one of the plurality of merchants, the validation information may comprise an instruction to apply a discount in accordance with the discount-arrangement information associated with the merchant party. In some instances where the merchant party is not one of the plurality of merchants, the validation information comprises an indication that no discount is to be provided to the transaction. In other instances where the merchant party is not one of the plurality of merchants, a record may be generated for recording transaction information related to the merchant party. Where such a record already exists, the method may comprise recording at least a portion of the transaction information in the record. Criteria may be identified from the record for initiation of marketing efforts with the merchant party. More generally, at least a portion of the transaction information may be recorded in a database. The information in the database may be analyzed according to specified criteria, and a summary report may be generated from the analyzed information. In some instances, the criteria may have been specified by the merchant party.

[0013] These methods may be embodied in a computer-readable storage medium having a computer-readable program embodied therein for directing operation of a computer system. Such a computer system may include a processor, a storage device, and a communications system. The computer-readable program includes instructions for operating the computer system to manage a discount arrangement in accordance with the embodiments described above.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0014] A further understanding of the nature and advantages of the present invention may be realized by reference to the remaining portions of the specification and the drawings wherein like reference numerals are used throughout the several drawings to refer to similar components. In some instances, a sublabel is associated with a reference numeral and follows a hyphen to denote one of multiple similar components. When reference is made to a reference numeral without specification to an existing sublabel, it is intended to refer to all such multiple similar components.

[0015] Fig. 1A is a block-diagram representation of an arrangement for implementing a discounting program in accordance with an embodiment of the invention;

[0016] Fig. 1B is a schematic diagram of a point-of-sale device that may be used with embodiments of the invention;

[0017] Fig. 1C is a schematic representation of an embodiment of a discounting process using the arrangement shown in Fig. 1A in the context of fundraising activity;

[0018] Fig. 2A is a flow diagram of an embodiment of the discounting process that corresponds generally to the representation of Fig. 1B;

[0019] Fig. 2B is a flow diagram of an embodiment of the invention that tracks information related to nonparticipating merchants;

[0020] Fig. 2C is a flow diagram of an embodiment of the invention that provides reporting functions; and

[0021] Fig. 3 is a schematic illustration of a computer system on which methods of the invention may be embodied.

## DETAILED DESCRIPTION OF THE INVENTION

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[0022] Embodiments of the invention provide discount-instrument methods and systems, including usage validation and tracking capabilities. In some of the discussion that follows, examples of the use of such discount instruments is provided, for illustrative purposes, in the context of fundraising programs. It will be appreciated, however, that the invention is not limited to fundraising applications and applies more generally to discount instruments regardless of how they may be obtained by customers. In some embodiments, the discount instrument may take the form of a plastic card similar in structure to a credit card or debit card. In fundraising applications, this card may be sold by individuals of a fundraising organization to customers, who may then use the card to obtain discounts on purchases of goods and/or services at one or more merchants. The card provides the customers with benefits in accordance with a specific discount arrangement, although this discount arrangement may vary among cards. As used herein, the term “discount arrangement” is intended to be construed broadly as any arrangement that provides for a modification of a transaction that benefits a customer. Examples of discount arrangements include provisions that uniformly reduce the cost of transactions either by a percentage amount or predetermined fixed amount, provide “buy one, get one free” or “buy one, get the second at half price” arrangements, and the like. In addition, the benefit provided at each merchant may differ, with one providing a 5% discount, for example, and another providing a free product (such as a free order of popcorn at a movie theater).

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[0023] One structure that may be used to enable such embodiments is shown schematically with a block diagram in Fig. 1A. In this figure, the general operation of a fundraising system is coordinated with a host system 110. The host system 110 is controlled by a coordination entity 112 that may be responsible for different functions in different embodiments. In a simple embodiment, the host system 110 acts only to coordinate whether the status of individual discount instruments is active or inactive, but in other embodiments it performs further functions, such as tracking and reporting usage information. The host

system 110 may additionally maintain information related to the implementation of the system on a database 114 and may use that information to provide discount instructions to a merchant 122 in accordance with the system when a customer 126 presents one of the discount instruments. The host system 110 may also be equipped to modify the

5 implementation information as dictated by a merchant.

[0024] Interaction between the host system 110 and the merchant 122 and customer 126 may be effected with a point-of-sale device 118 at a location of the merchant. Generally, the point-of-sale device 118 is equipped to read information from one of the discount

10 instruments and to transmit that information to the host system 110. The host system 110 may then provide a response to the point-of-sale device 118 with a validation or denial of the request. Thus, in an embodiment where the discount instrument comprises a plastic card with a magnetic strip, the point-of-sale device 118 may include a magnetic-strip reader. In other embodiments, the discount instrument may include other features, such as magnetic ink, a bar

15 code, optical indicia, or the like, that the point-of-sale device 118 is equipped to read with magnetic-ink readers, bar-code readers, optical readers, or similar reading devices. In some embodiments, the point-of-sale device 118 may also be equipped to exchange information with a financial institution to coordinate payment by the customer 126 for an associated transaction, such as when the customer pays for the transaction with a credit card, debit card,

20 check, or other instrument. Examples of point-of-sale devices that include multiple capabilities for extracting information from such transaction instruments and/or discount instruments are provided in the following commonly assigned applications, the entire disclosures of which are incorporated herein by reference for all purposes: U.S. Prov. Pat. Appl. No. 60/147,889, entitled "INTEGRATED POINT OF SALE DEVICE," filed August 9,

25 1999 by Randy J. Templeton *et al.*; U.S. Pat. Appl. No. 09/634,901, entitled "POINT OF SALE PAYMENT SYSTEM," filed August 9, 2000 by Randy J. Templeton *et al.*; U.S. Pat. Appl. No. 10/116,689, entitled "SYSTEMS AND METHODS FOR PERFORMING

TRANSACTIONS AT A POINT-OF-SALE," filed April 3, 2002 by Earney Stoutenburg *et al.*; U.S. Pat. Appl. No. 10/116,733, entitled "SYSTEMS AND METHODS FOR

30 DEPLOYING A POINT-OF-SALE SYSTEM," filed April 3, 2002 by Earney Stoutenburg *et al.*; U.S. Pat. Appl. No. 10/116,686, entitled "SYSTEMS AND METHODS FOR UTILIZING A POINT-OF-SALE SYSTEM," filed April 3, 2002 by Earney Stoutenburg *et al.*; and U.S. Pat. Appl. No. 10/116,735, entitled "SYSTEMS AND METHODS FOR

CONFIGURING A POINT-OF-SALE SYSTEM," filed April 3, 2002 by Earney  
Stoutenburg.

[0025] One specific example of how the point-of-sale device 118 may be constructed  
5 is illustrated in Fig. 1B. The point-of-sale device 118 comprises a housing 156 having a  
keypad 158 for entering various types of information. The keys of the keypad 158 may  
permit the entry of numbers or letters, or may be function keys for performing various  
functions. The point-of-sale device 118 further includes a display screen 160 for displaying  
information relating to a transaction and/or to a discount. A card reader 162 may also be  
10 provided for reading information from cards. The point-of-sale device 118 may  
communicate with the host system 110 using any of a wide variety of communications  
systems, such as by a phone network, a wide-area network such as the Internet, a local-area  
network, a wireless network, and the like.

15 [0026] In addition to these structural elements of the system, Fig. 1A illustrates how  
the system may be used in fundraising applications by additionally showing the fundraising  
organization 102 and individual participant fundraisers 106. The interaction of fundraising  
organization 102 and the individual fundraisers with the host system 110, merchants 122, and  
customers 126 is indicated through the use of dotted lines in the diagram.

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[0027] Figs. 1C and 2A depict the implementation of a typical fundraising transaction  
that uses the arrangement shown in Fig. 1A. Fig. 1C schematically shows the flow of  
interactions between different components of the structure while Fig. 2A provides a flow  
diagram that details a specific implementation in an embodiment. The steps shown in Fig.  
25 2A are divided into two columns. The left column shows an example of how customers may  
acquire discount instruments as part of a fundraising program and the right column shows an  
example of how a customer with an authenticated discount instrument may use it to obtain  
discounts. The steps shown in the right column may thus be used to obtain discounts even if  
the discount instrument is acquired by the customer in a manner other than as part of a  
30 fundraising program. The solid-line arrows in Fig. 1C correspond to the blocks in the flow

diagram of Fig. 2A. The following description of an exemplary transaction thus makes reference to both Figs. 1C and 2A simultaneously.

[0028] As indicated at block 204, the initiation of a fundraising program according to 5 an embodiment of the invention begins with establishing an arrangement between the fundraising organization 102 and the coordination entity 112 and/or one or more merchants 122. Such an arrangement is an example of a discount arrangement that specifies the conditions under which the discount program may operate: which merchants are to participate, what discount benefits those merchants are to provide, what time limits may 10 apply, etc. In some instances, the coordination entity 112 may have one or more preconfigured arrangements from which the fundraising organization 102 selects. After determining what discount arrangement is to be used, further participation by the fundraising organization 102 may be as simple as selling discount instruments to customers for a price in accordance with the discount arrangement. A portion of the price for each discount 15 instrument is retained by the fundraising organization 102 and the remainder is retained by the coordination entity 112.

[0029] Thus, at block 208, the coordination entity 112 provides a plurality of discount instruments to the fundraising organization 102 for it to sell. In some embodiments, the 20 discount instruments may comprise cards with magnetic strips, although the use of other forms for the discount instruments is also within the scope of the invention. In some embodiments the discount instruments are inactive when they are provided at block 208, thereby preventing their fraudulent use should any of them be lost or stolen, although in other embodiments they may be active. In one embodiment, the discount instruments are ensured 25 to be inactivate by assigning a unique identifier to each discount instrument and designating it as inactive in the database 114. In some embodiments, the unique identifier may correspond to an account number. The primary activity of the fundraising organization 102 is carried out at block 216 as individual fundraisers 106 sell the discount instruments to customers 126. Such sales may be made in any suitable fashion, including through door-to-door solicitation, 30 mail-order sales, sales at shopping malls, etc.

[0030] After the discount instruments have been sold to customers 126, the individual fundraisers 106 notify the fundraising organization 102 at block 220 of which discount instruments have been sold and require activation, if applicable. This information may be accumulated from multiple individual fundraisers 106 so that the fundraising organization 5 conveys a summary of the information to the coordination entity 112 at block 224. This may be done in a variety of different ways. In one embodiment, the host system 110 includes an interface for connection with the Internet, which is then used by the fundraising organization to identify which of the discount instruments should be activated. In other embodiments, a telephone interface may alternatively use dual-tone multiple-frequency (“DTMF”) tones to 10 convey the information. In still other embodiments, the information may be conveyed to a representative of the coordination entity 112 who enters it into the host system 110. Regardless of how the information identifying which cards have been sold is provided to the host system 110, the host system 110 activates the respective discount instruments at block 228. Such activation may be achieved by removing the “inactive” designation for each of the 15 discount instruments in the database 114, for example.

[0031] After each of the steps shown in the left column of Fig. 2A, each customer 126 who has purchased one of the discount instruments may now use it in conjunction with transactions as set forth in the discount arrangement. In one embodiment, for example, the 20 discount arrangement may provide that customers receive a discount on all items purchased from a particular merchant 122. Thus, at block 232 the customer 126 makes a purchase of goods and/or services at one of the participating merchants 122. As part of the transaction, the customer 126 provides the discount instrument so that it may be swiped at the point-of-sale device 118 at block 236. The point-of-sale device 118 reads identification information 25 from the discount instrument, such as by reading an identifier from a magnetic strip. This identification information is conveyed to the host system 110 at block 240 so that the host system 110 may verify the validity of the discount instrument and retrieve activation information at block 244. A validation is returned to the point-of-sale device at block 248 so that the appropriate discount may be applied.

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[0032] Actual application of the discount may be performed differently in different embodiments, depending on the configuration of the host system 110. For example, in one

embodiment, the identification provided by the point-of-sale device 118 to the host system 110 at block 240 may be in the form of an authorization, a specific form of which is a balance-inquiry function, with the validation returned at block 248 indicating only that the discount instrument has been activated. In such an instance, the merchant may collect  
5 specific discounting information from the discount instrument itself to apply the discount. The information may be printed on the discount instrument so that the merchant keys the discount into the point-of-sale device 118. Alternatively, the information may be encoded on the discount instrument, such as in the form of a bar code, that may be read with the point-of-sale device 118.

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[0033] In other embodiments, details of the discount arrangement may be stored in the database 114 connected with the host system 110. In such instances, the validation information returned to the point-of-sale device 118 at block 248 may include not only an indication that the discount instrument has been activated, but also the applicable discount for  
15 that instrument. In such an embodiment, the point-of-sale device 118 may then apply the discount automatically without further action on the part of the merchant. For example, if the discount arrangement indicates that the merchant is to offer a 5% discount on all merchandise, the point-of-sale device 118 may apply that discount automatically. If, instead, the discount arrangement indicates that a certain product should be provided free of charge,  
20 the point-of-sale device 118 may reduce the total cost of the transaction by the cost of that product.

[0034] In instances where such detailed information regarding the discount arrangement is stored at the database 114, it may be appropriate for the information to be  
25 updated in response to the transaction. Thus, in such instances, the host system 110 updates the database 114 in accordance with the use of the discount instrument at block 252. For example, if the fundraising arrangement provides for a 5% discount at a particular merchant only three times, the database 114 is updated to record that an additional one of those times has been used; if the customer 126 attempts to use the discount instrument a fourth time, the  
30 host system 110 will not instruct the point-of-sale device 118 to apply the discount. Similarly, if the fundraising arrangement provides for a free product only once, the database 114 is updated to record that that portion of the fundraising arrangement has been satisfied

and that the product should not be provided free in the future. The updating may also record information about the use of the discount instrument. Such information may be used in evaluating the popularity of different components of fundraising arrangements to improve offerings in the future. Such evaluations may themselves be performed with broad or narrow  
5 demographic limitations, providing the coordination entity 112 and/or the merchants 122 with useful marketing information.

[0035] There are other techniques that may alternatively be used for activating discount instruments in other embodiments. For example, the activation could be performed  
10 the first time the customer uses the discount instrument rather than activating it in advance. It is also possible for the discount instrument to be activated before it is ever sold to a customer. In some instances, the activation is performed as a batch activation of a plurality of cards at one time..

15 [0036] In some embodiments, methods of invention provide for identifying and responding to merchants that do not participate in the program of discount arrangements. For example, a customer who has purchased one of the discount instruments may present it at a variety of merchants with the hope that they participate, even though some of them may not. Fig. 2B thus uses a flow diagram to provide an illustration of how methods for  
20 accommodating nonparticipating merchants may be integrated with the method illustrated in Fig. 2A in some embodiments. After the host system 110 has retrieved activation information for the discount instrument at block 244 of Fig. 2A, a check may be performed at block 256 whether the merchant identified with the point-of-sale device 118 is a participating merchant. If so, the method continues as previously described at block 248 of Fig. 2A.

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[0037] If, however, the merchant is identified as a nonparticipating merchant, records may be maintained for the number of times customers attempt to use the discount instruments with that merchant, when they attempt to use them (by day of week, time of day, or other criteria), the types and dollar-amounts of transactions, their locations, etc. Accordingly, a  
30 check is made at block 260 whether any record has already been established for the identified nonparticipating merchant. If not, such a record is established at block 262 for use when the

same merchant is subsequently identified. At block 264, relevant transaction information is added to the record for that merchant. It is generally desirable to record as much information as possible from the transaction information to leave open as much versatility as possible for use of the information. In some instances, however, it may be appropriate to record only

5 portions of the information where its uses are well known in advance, such as through past experience in use of the information. At block 268, the host system 110 returns nonvalidation information back to the point-of-sale device 118 so that the customer may be informed that the merchant does not participate at block 272.

10 [0038] Notification of the merchant's nonparticipation may well cause the customer to develop a negative impression of the merchant, at least to the extent that the customer may be inclined to patronize merchants from whom a discount may be obtained with the discount instrument. Over time, the collection of information by the host system 110 may thus be used to identify possible merchant candidates for marketing efforts. These marketing efforts may

15 use the collected information to demonstrate to the merchant statistical information on numbers of customers who would like to use the instruments, the size of transactions implicated, temporal and geographic distributions of such attempts, and the like. As indicated at block 276, in some instances the host system 110 itself may be configured to identify specific criteria that have been satisfied to prompt initiation of such marketing

20 efforts. Such criteria may include threshold numbers of customers presenting the instruments at the nonparticipating merchant, threshold transaction values, separate threshold values in localized geographic locations or localized time periods, and other correlations. In this way, embodiments of the invention contemplate mechanisms for increasing the value of the program of discount arrangements by increasing the pool of participating merchants.

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[0039] In other embodiments, the host system 110 may make similar use of information collected from transactions that involve participating merchants. One such embodiment is illustrated in Fig. 2C, in which the host system 110 systematically adds transaction information to a database at block 284. While the value of stored transaction

30 information is generally greater when it is more complete, in some instances it may be collected selectively. For example, in some embodiments, all transaction information that is received by the host system 110, whether from a participating or nonparticipating merchant,

is collected. In other embodiments, only transaction information received from a participating merchant is collected. In still other embodiments, only transaction information meeting certain specified criteria, based on such factors as transaction size, time, location, and the like, is collected.

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[0040] The collected information is periodically analyzed according to specified criteria, as indicated at block 288. Such analysis is intended to digest the large volume of accumulated information using recognized statistical techniques to permit actual behaviors and trends to be identified. A summary of such information may be presented in the form of 10 a summary report for distribution to relevant parties. For example, a summary report limited to information about a particular merchant may be distributed to that merchant. This allows the merchant to evaluate the effectiveness of its participation in the program and perhaps to modify the types of discount arrangements it wishes to offer. To facilitate such evaluations, the analysis performed at block 288 and the summary report generated at block 292 may be 15 performed according to criteria specified in advance by the merchant. A summary report may also be distributed to the coordination entity 112 to allow it to evaluate the effectiveness of the program as a whole. Such an evaluation may suggest changes to improve the program in terms of the types of discounts offered, the types of merchants included, and the like.

20 [0041] Fig. 3 provides a schematic illustration of a structure that may be used to implement the host system 110. Other structures that may be used are, for example, structures provided by IPS Card Solutions d/b/a ValueLink. Fig. 3 broadly illustrates how individual system elements may be implemented in a separated or more integrated manner. The host system is shown comprised of hardware elements that are electrically coupled via 25 bus 326, including a processor 302, an input device 304, an output device 306, the database 114, a computer-readable storage media reader 310a, a communications system 314, a processing acceleration unit 316 such as a DSP or special-purpose processor, and a memory 318. The computer-readable storage media reader 310a is further connected to a computer-readable storage medium 310b, the combination comprehensively representing remote, local, 30 fixed, and/or removable storage devices plus storage media for temporarily and/or more permanently containing computer-readable information. The communications system 314 may comprise a wired, wireless, modem, and/or other type of interfacing connection and

permits data to be exchanged with the Internet, DTMF processor, cable processor, and/or point-of-sale devices 118 as described in connection with Figs. 1A – 2C.

[0042] The host system 110 also comprises software elements, shown as being currently located within working memory 320, including an operating system 324 and other code 322, such as a program designed to implement methods of the invention. It will be apparent to those skilled in the art that substantial variations may be made in accordance with specific requirements. For example, customized hardware might also be used and/or particular elements might be implemented in hardware, software (including portable software, such as applets), or both. Further, connection to other computing devices such as network input/output devices may be employed.

[0043] In another set of embodiments, the use of a host system may be avoided. For example, the discount instrument may comprise a chip card (sometimes referred to as a “smart” card) that includes a chip on which information may be stored and retrieved. In such an embodiment, the chip acts as a surrogate for the host system, retaining information regarding the activation of the discount instrument and possibly also specific information regarding the applicable discount arrangement. This information may or may not be subject to updating depending on the nature of the discount arrangement. The chip card may be used in much the same way as described above, with the information being extracted and/or modified with a chip-card reader/writer comprised by the point-of-sale device 118. The operation of the point-of-sale device 118 is similar to that described previously except that it functions in response to information extracted only from the discount instrument rather than also in response to information received from the host system.

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#### Exemplary Discount Arrangements

[0044] The systems and methods described above permit the implementation of a number of different types of discount arrangements. The following two examples of a “discount card” arrangement and a “coupon card” arrangement are intended merely as

illustrations. Other arrangements will be evident to those of skill in the art after reading this description.

[0045] In one embodiment, the discount arrangement provides discount cards, which  
5 may, for example, be sold by a fundraising organization 102. The cost of the discount cards charged to customers is \$10, of which \$5 is retained by the fundraising organization 102 and \$5 is retained by the coordination entity 112. The discount cards provide for a 5% discount on merchandise purchased at Merchant A and a 10% discount on merchandise at Merchant B. These merchants have previously agreed to participate in the arrangement with the

10 coordination entity 112 because of the enhanced visibility that their participation provides. In this example, the discount cards are limited in time by a year (or other set time period) to encourage annual repurchases by customers during subsequent fundraising drives. After customers purchase the discount cards from individual fundraisers and the cards are validated, they may use them as described above to receive discounts at Merchants A and B.

15 In an embodiment where only an authorization is performed by the merchant to ensure that the discount card has been activated, the specific discount information may be encoded in two bar codes that are included on the card in addition to the magnetic stripe — one of the bar codes encodes the discount for Merchant A and the other bar code encodes the discount for Merchant B. Alternatively, the actual discounts may be printed on the card for each  
20 merchant. In an embodiment where the host system maintains information regarding the discount arrangement, it may return the appropriate discount rate to the point-of-sale device as part of the verification function.

[0046] In another embodiment, a discount arrangement provides coupon cards, which

25 may be sold by a fundraising organization 102. The cost of the coupon cards charged to customers is \$10, of which \$5 is retained by the fundraising organization 102 and \$5 is retained by the coordination entity 112. The coupon cards provide for a wide range of one-time discounts off specifically identified products purchased at any merchant. The cards may be advertised to the customers as having, say, a total value of \$125 worth of coupons. After  
30 customers purchase the coupon cards from individual fundraisers and the cards are validated, they may use them as described above to redeem each of the one-time discounts at any merchant that has a point-of-sale device capable of communication with the host system 110.

In one embodiment, the limitation that the cards be used for one-time discounts is enforced by having the host system 110 manage the discount arrangement and update records on the database 114 each time the card is used.

- 5 [0047] For each of these embodiments, the usage of the cards may be collected as authorizations are provided by the host system 110 for their use. This usage information may include a record of the use of each card at each merchant, with an indication of the date, time, and specific store at which it was used. Software maintained by the host system may perform analytical functions to summarize the information to provide it to the merchants or may
- 10 provide raw data to merchants for them to perform their own analytical functions. In this way, merchants participating in the program may receive information valuable in the analysis of their business practices.

- [0048] Thus, having described several embodiments, it will be recognized by those of skill in the art that various modifications, alternative constructions, and equivalents may be used without departing from the spirit of the invention. Accordingly, the above description should not be taken as limiting the scope of the invention, which is defined in the following claims.